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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/522,832 03/10/00 SAWAZAKI

K PMS 257760

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MMC1/0329

EXAMINER

BAUMEISTER, B

ART UNIT

PAPER NUMBER

2815

DATE MAILED:

03/29/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
09/522,832

Applicant(s)  
Sawazaki et al.

Examiner  
William Baumeister

Group Art Unit  
2815



☒ Responsive to communication(s) filed on Mar 10, 2001

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-6 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-6 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Mar 10, 2000 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## DETAILED ACTION

### *Drawings*

1. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakamura et al. '307. Note for example FIGs 3-5 wherein a MQW active region 16 is adjacent to n-type region 201 which is formed of a material having a larger band-gap than that of the active region (clad region) and having a thickness of < 500 angstroms. The barrier layers or the active region are disclosed as having a thickness of about 50 angstroms (col. 14, lines 42-51). Also, an intermediate layer 402 is adjacent to the clad region 401 and is recited as being able to be composed of  $\text{In}_k\text{Ga}_{1-k}\text{N}$  ( $0 \leq k \leq 1$ ) (col. 10, lines 45-50).

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4. Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Chiyo et al. '545. See e.g. the table at col 10 reciting that the barrier layers are 3.5 nm thick while the n-clad is 4 microns thick. The recitation of an intermediate layer reads on the buffer layer 3.


5. Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 10-135514 [Koide] (supplied in IDS, paper #3). Koide discloses an LED having a lower 0.5 micron-thick n-clad layer 3b (see e.g., col 5, line 30) adjacent MQB active layer having barrier and well thicknesses of 5 nm each (see e.g., col. 7, line 40).

#### INFORMATION ON HOW TO CONTACT THE USPTO

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner, **B. William Baumeister**, at (703) 306-9165. The examiner can normally be reached Monday through Friday, 8:30 a.m. to 5:00 p.m. If the Examiner is not available, the Examiner's supervisor, Mr. Eddie Lee, can be reached at (703) 308-1690. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

B. William Baumeister

March 21, 2001

  
**EDDIE LEE**  
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